

Springbrook Creek Wetland and Habitat Mitigation Bank Unit E

USACE IP 200600100

Northwest Region

2015 MONITORING REPORT

Wetlands Program

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General Site Information	
USACE NWP 23 Number	200600100
Mitigation Location	Southwest Renton, King County
LLID Number	1222324474478
Construction Date	2008
Monitoring Period	2009-2018
Year of Monitoring	7 of 10
Type of Mitigation	Wetland Re-Establishment
Planned Area of Mitigation	8.37 acres

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Summary of Monitoring Results and Management Activities (2015)

Performance Standards	2015 Results ¹	Management Activities
Native woody vegetation within the wetland tree/shrub planting areas will provide at least 60% aerial cover. (E-6)	95% cover ($CI_{80\%} = 90-99\%$)	
Remove all Japanese knotweed (<i>Reynoutria japonica</i>), English Ivy (<i>Hedera helix</i>), and purple loosestrife (<i>Lythrum salicaria</i>) identified within Unit E. (E-8)	English Ivy present; no Japanese knotweed or purple loosestrife observed	Weed control activity occurred on 3/31 and 7/27 in 2015.

Report Introduction

This report summarizes seventh-year (Year-7) monitoring activities at Unit E of the Springbrook Creek Wetland and Habitat Mitigation Bank. Included are a site description, the performance standards, an explanation of monitoring methods, and an evaluation of site development. Monitoring activities included a vegetation survey on August 4, 2015.

¹ Estimated values are presented with their corresponding statistical confidence interval. For example, 95% ($CI_{80\%} = 90-99\%$ cover) means we are 80% confident that the true cover value is between 90% and 99%.

What is the Springbrook Creek Wetland and Habitat Mitigation Bank?

This mitigation bank contains re-established, rehabilitated, and enhanced wetlands as well as enhanced uplands and riparian areas adjacent to Springbrook Creek. Unit E (Figure 1) consists of 8.37 acres of re-established wetland and 4.42 acres of riparian upland enhancement. The bank is operated and managed by WSDOT and the City of Renton. The purpose of the bank is to provide compensation for unavoidable impacts to wetlands and other aquatic resources caused by WSDOT highway construction projects and City of Renton mitigation requirements within the service area.

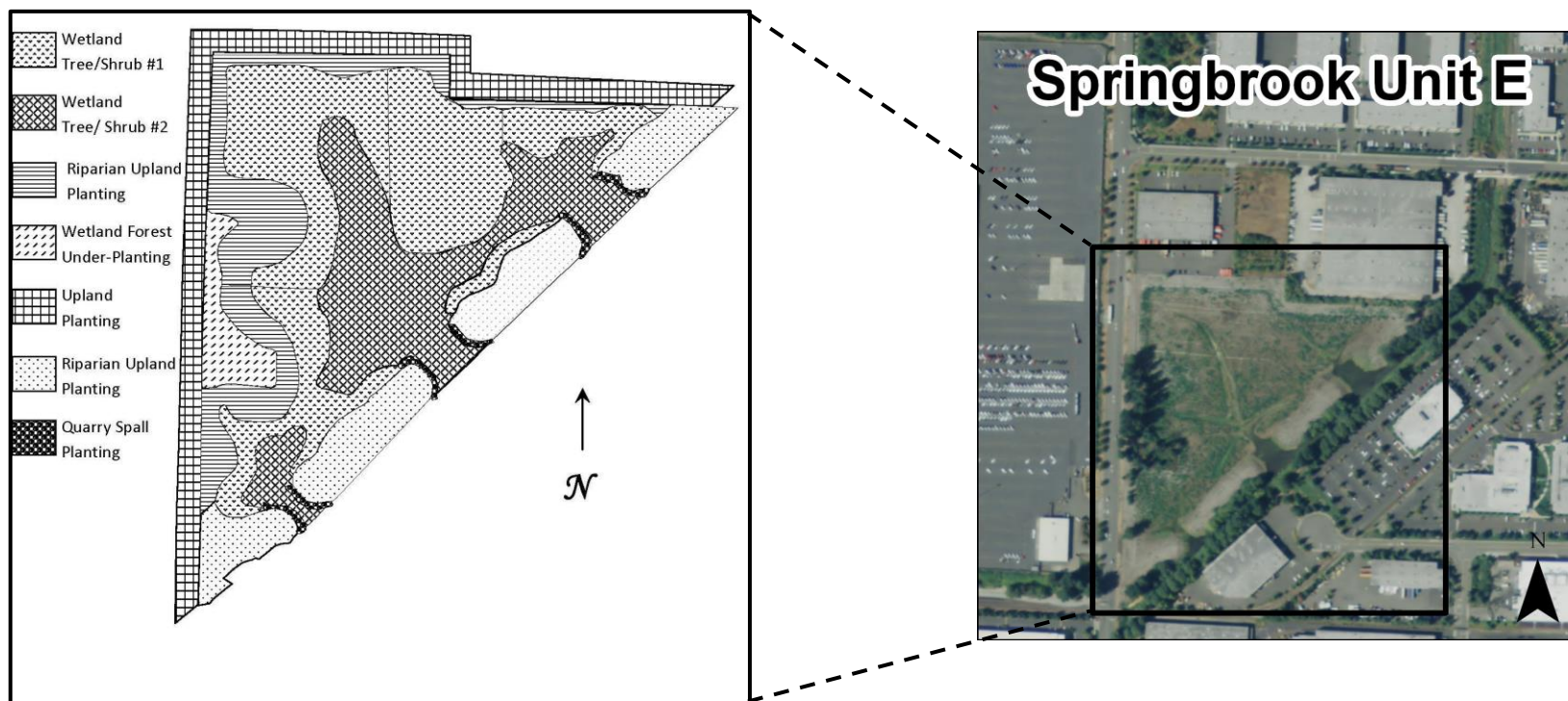


Figure 1 Site Sketch

The Springbrook Creek Wetland and Habitat Mitigation Bank is composed of five separate units, totaling 129.37 acres, which represents some of the last remaining large tracts of undeveloped land in the Green River Basin. All five units are located in the southwestern portion of the City of Renton, King County, Washington.

What are the performance standards for this site?

Year-7

Performance Standard 1(E-6)

In Year 7, native woody vegetation within the wetland tree/shrub planting areas will provide at least 60 percent aerial cover.

Performance Standard 2 (E-8)

In Years 1 through 10, remove all Japanese knotweed, English Ivy, and purple loosestrife identified within Unit E.

Appendix 1 shows the as-built planting plan (WSDOT 2009)

How were the performance standards evaluated?

The table below documents the sampling methodology utilized for Performance Standard 1 as required by the mitigation plan. For additional details on the methods see the [WSDOT Wetland Mitigation Site Monitoring Methods Paper](#) (WSDOT 2008).

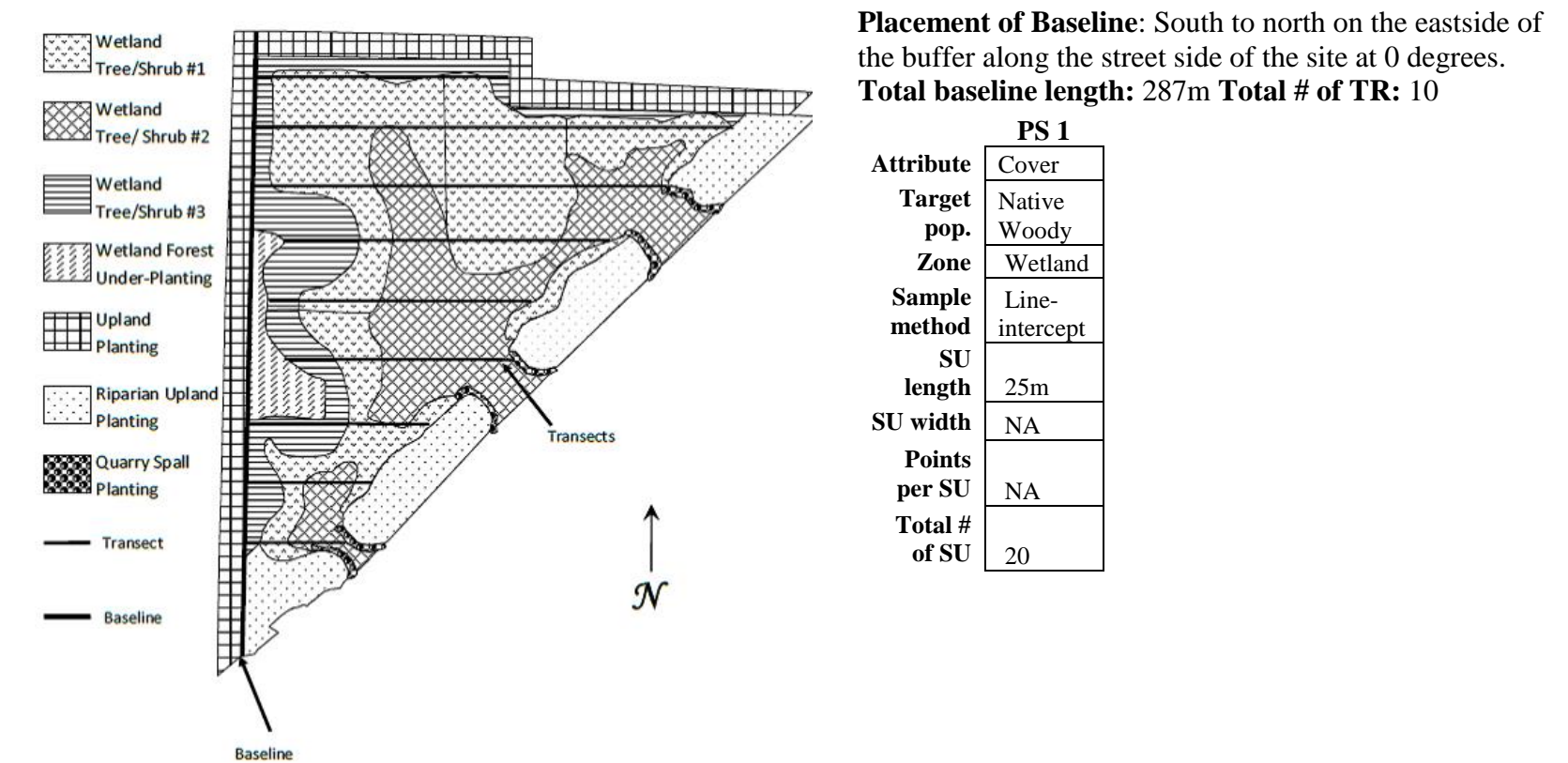


Figure 2 Site Sampling Design (2015)

How is the site developing?

This site continues to develop as intended. The woody species in both the wetland and the buffer are extremely dense with high cover. Invasive cover across the site is very low. The site is intended to improve water quality, habitat, floodplain and riparian functions. These functions have likely been improved due to the increase in wetland acreage connected to Springbrook Creek, the increasing riparian woody cover directly adjacent to the creek, and the increased number of vegetation strata.

Results for Performance Standard 1(E-6)

(At least 60% cover of native, woody vegetation in the wetland tree/shrub planting areas):

Cover of woody species in the wetland is estimated at 95% ($CI_{80\%} = 90-99\%$) (Photo1). This estimate exceeds the performance standard target. Dominant species include willow (*Salix* species) and black cottonwood (*Populus balsamifera*) in the canopy (five to seven meters tall), and Nootka rose (*Rosa nutkana*) in the understory (one to three meters tall). Subdominant species include Oregon ash (*Fraxinus latifolia*), red alder (*Alnus rubra*), and twinberry (*Lonicera involucrata*).



Photo 1
Woody cover in the wetland (August 2015)

Results for Performance Standard 2 (E-8)

(Remove all Japanese knotweed, English Ivy, and purple loosestrife):

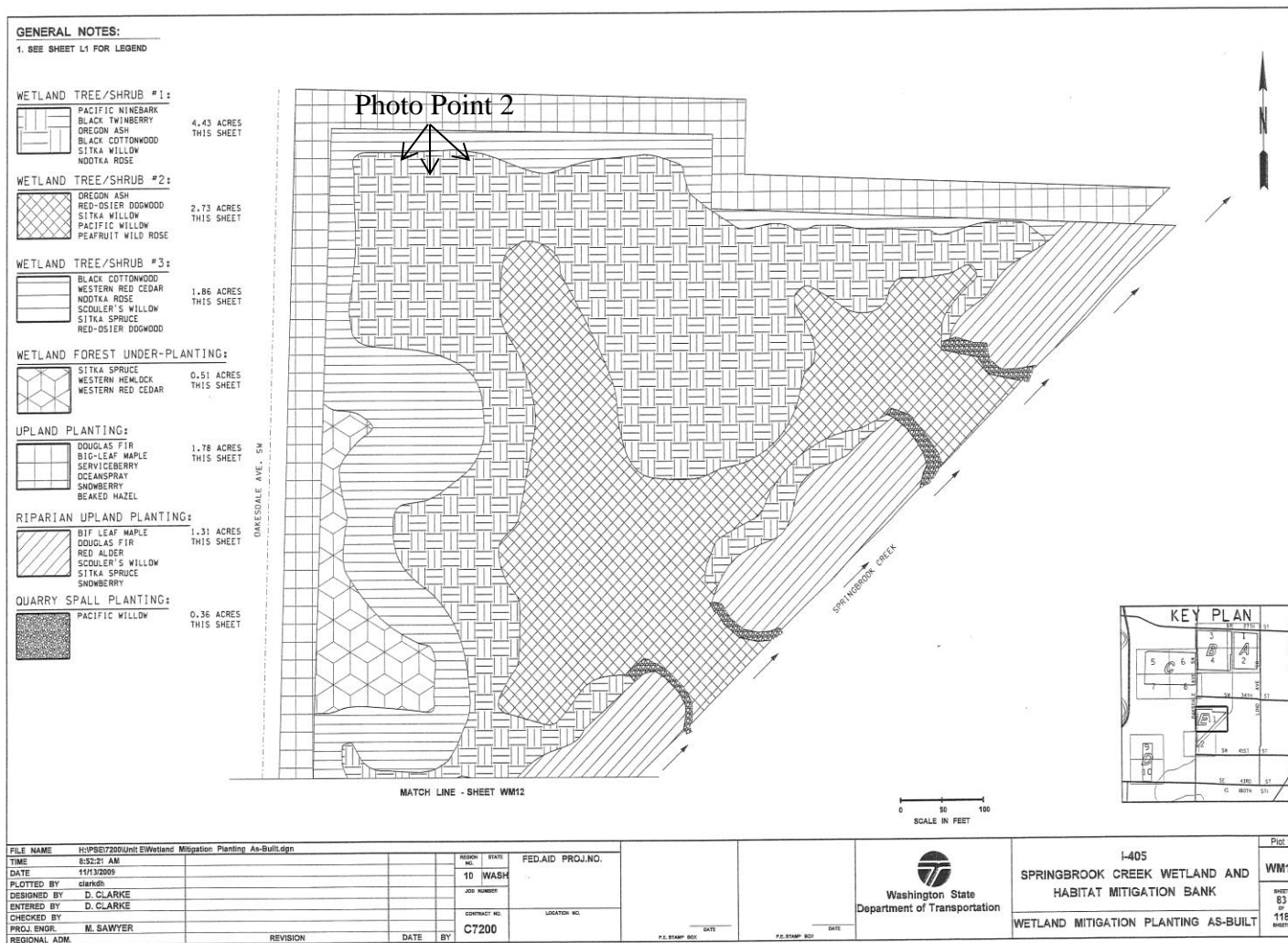
A couple of patches of English Ivy were observed in the buffer. No knotweed or purple loosestrife was observed.

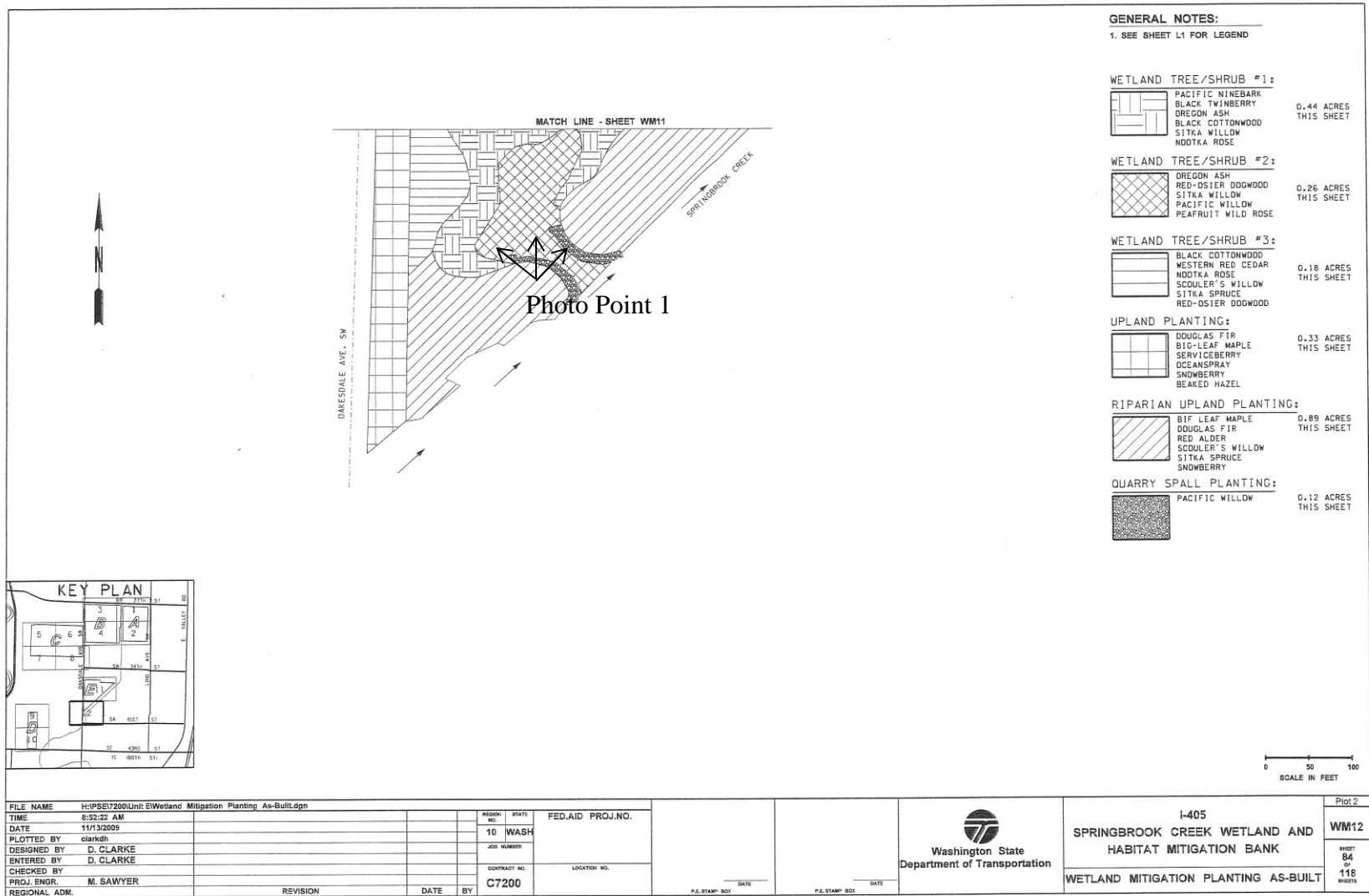
What is planned for this site?

Unit E will continue to receive on-going weed control on an as-needed basis. English Ivy observed in the buffer will be removed.

(from WSDOT 2009)

(from WSDOT 2009)





Appendix 2 – Photo Points

The photographs below were taken from permanent photo-points on August 4, 2015 and document current site development.



Photo Point 1a



Photo Point 1b



Photo Point 1c



Photo Point 2a



Photo Point 2b



Photo Point 2c

Literature Cited

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2. [USACE] US Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), Wakeley JS, Lichvar RW, Noble CV, editors. Vicksburg (MS): US Army Engineer Research and Development Center. ERDC/EL TR-10-3. Available at: http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/west_mt_finalsupp.pdf
3. [WSDOT] Washington State Department of Transportation. 2006. Springbrook Creek Wetland and Habitat Mitigation Bank Instrument. I-405 Corridor Program.
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